=> d his

(FILE 'HOME' ENTERED AT 16:22:52 ON 16 MAR 2001)

FILE 'CAPLUS' ENTERED AT 16:23:24 ON 16 MAR 2001
E GLASS/CT
L1 31358 S E184-186
L2 398 S E216

FILE 'STNGUIDE' ENTERED AT 16:38:57 ON 16 MAR 2001

L3 0 S E314
L4 0 S E314
L5 0 S E314D HIS

FILE 'CAPLUS' ENTERED AT 16:40:12 ON 16 MAR 2001

L6 700 S E314
L7 4830 S E616
L8 37104 S L1 OR L2 OR L6 OR L7

FILE 'STNGUIDE' ENTERED AT 16:43:05 ON 16 MAR 2001

FILE 'CAPLUS' ENTERED AT 16:45:07 ON 16 MAR 2001
E THU/RL
L9 364061 S E3
L10 73 S L8 AND L9

FILE 'STNGUIDE' ENTERED AT 16:50:40 ON 16 MAR 2001

Reviewed online. All not relevant

=> d que l10

L1 31358 SEA FILE=CAPLUS ("GLASS FIBERS, USES"/CT OR "GLASS FIBERS, USES AND MISCELLANEOUS"/CT OR "GLASS FLAKES"/CT)

L2 398 SEA FILE=CAPLUS "GLASS POWDERS"/CT

L6 700 SEA FILE=CAPLUS "GLASS, MISCELLANEOUS"/CT

L7 4830 SEA FILE=CAPLUS "GLASS, USES"/CT

L8 37104 SEA FILE=CAPLUS L1 OR L2 OR L6 OR L7

L9 364061 SEA FILE=CAPLUS THU/RL

L10 73 SEA FILE=CAPLUS L8 AND L9

FILE 'CAPLUS, MEDLINE' ENTERED AT 17:08:03 ON 16 MAR 2001

L11 888 S (BIOACTIVE GLASS OR BIO ACTIVE GLASS)

L12 36 S L11 AND (INFLAMMATION# OR SKIN# OR CUTANEOUS OR ACNE OR DERMA

L13 32 DUP REM L12 (4 DUPLICATES REMOVED)

=> d que l13

L11 888 SEA (BIOACTIVE GLASS OR BIO ACTIVE GLASS)

L12 36 SEA L11 AND (INFLAMMATION# OR SKIN# OR CUTANEOUS OR ACNE OR DERMATITIS OR HIVES OR PSORIASIS OR RASH? OR INSECT BITE# OR INSECT STING# OR WOUND#)

L13 32 DUP REM L12 (4 DUPLICATES REMOVED)

=> d 1-32 bib ab

L13 ANSWER 1 OF 32 CAPLUS COPYRIGHT 2001 ACS
AN 2001:129875 CAPLUS
DN 134:168416
TI Injectable **bioactive glass** in a dextran suspension
IN Hench, Larry L.; West, Jon K.; Latorre, Guy; Wilson, June; Toreki, William, III; Batich, Christopher
PA University of Florida Research Foundation, Inc., USA
SO U.S., 5 pp., Cont.-in-part of U. S. 5,840,290.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 6190684	B1	20010220	US 1998-198114	19981123
	US 5840290	A	19981124	US 1996-657713	19960530
PRAI	US 1996-657713		19960530		

AB The present invention relates to injectable suspensions of **bioactive glass** and dextran or a dextran deriv. for the repair of soft tissue or hard bone in mammals, esp. humans. In one embodiment, the dextran derivs. include free radical polymerizable groups, which can be polymd. following injection into a patient. Dextran of an av. mol. wt. of about 35,000-74,000 Daltons (3.5 g) was stirred into water for injection (5.0 mL) to form a viscous soln. and the soln. was then mixed with Bioglass 45S5 (5.0 cc), having a particle size of about 106-125 .mu.m to form a 50:50 suspension of uniform consistency. The suspension was sterilized and loaded into a 3 mL syringe fitted with a 35 mm, 18 gauge needle and injected into s.c. soft tissue of a mouse.
RE.CNT 2
RE
(1) Hench; US 5840290 1998 CAPLUS
(2) Hubbell; US 5410016 1995 CAPLUS

L13 ANSWER 2 OF 32 CAPLUS COPYRIGHT 2001 ACS
AN 2000:898788 CAPLUS
TI Pre-treated bioactive composite in rat soft tissue
AU Tirri, T.; Jaakkola, T.; Narhi, T.; Rich, J.; Seppala, J.; Yli-Urpo, A.
CS Biomaterials Research and Institute of Dentistry, University of Turku, Turku, FIN-20540, Finland
SO Key Eng. Mater. (2001), 192-195(Bioceramics), 653-656
CODEN: KEMAEY; ISSN: 1013-9826
PB Trans Tech Publications Ltd.
DT Journal
LA English
AB Effect of in vitro formed calcium phosphate surface on a bioactive composite was studied in rat s.c. tissue. Pre-treatment in simulated body fluid (SBF) for 14 days resulted in the formation of calcium phosphate deposites on the composite surface whereas no formation was obsd. on the copolymer without **bioactive glass**. Pre-treatment had no effect on short term soft tissue reactions around the copolymer without **bioactive glass** granules whereas the calcium phosphate surface formed on the composite resulted in delayed healing of the surgical **wound**. This may be due to mech. stress caused by rough calcium phosphate surface.
RE.CNT 4
RE

(1) Ahola, M; Int J Pharmac 1999, V181, P181 CAPLUS
(2) Den Dunnen, W; J Biomed Mater Res 1992, V36, P337
(3) Isobe, M; J Biomed Mater Res 1996, V32, P433 CAPLUS
(4) Jansen, J; J Biomat Appl 1994, V9, P30 CAPLUS

L13 ANSWER 3 OF 32 CAPLUS COPYRIGHT 2001 ACS
AN 2000:900430 CAPLUS
DN 134:46817
TI Silver-containing, sol-gel derived bioglass antibacterial compositions
IN Bellantone, Maria; Coleman, Nichola J.; Hench, Larry L.
PA Usbiomaterials Corporation, USA
SO PCT Int. Appl., 26 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2000076486	A1	20001221	WO 2000-US16207	20000614

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

PRAI US 1999-139014 19990614
AB Silver-contg., sol-gel derived **bioactive glass** compns. and methods of prepn. and use thereof are disclosed. The compns. can be in the form of particles, fibers and/or coatings, among other possible forms, and can be used, for example, for treating **wounds**, improving the success of **skin** grafts, reducing the inflammatory response and providing anti-bacterial treatments to a patient in need thereof. Anti-bacterial properties can be imparted to implanted materials, such as prosthetic implants, sutures, stents, screws, plates, tubes, and the like, by incorporating the compns. into or onto the implanted materials. The compns. can also be used to prep. devices used for in vitro and ex vivo cell culture.
RE.CNT 3
RE
(1) Erbe; US 5681872 A 1997 CAPLUS
(2) Henry; US 5126141 A 1992
(3) Viegas; US 5298260 A 1994 CAPLUS

L13 ANSWER 4 OF 32 CAPLUS COPYRIGHT 2001 ACS
AN 2000:790277 CAPLUS
DN 133:340263
TI Anti-inflammatory **bioactive glass** particulates
IN Greenspan, David C.; Lee, Sean; Walpole, Marlo Tan
PA Usbiomaterials Corporation, USA
SO PCT Int. Appl., 30 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

PI WO 2000066086 A1 20001109 WO 2000-US11585 20000428
W: CA, JP
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE
PRAI US 1999-131529 19990429
AB Compns. and methods for systemically minimizing the inflammatory effects of TNF-.alpha. are disclosed. The compns. include particles of **bioactive glass** with a particle size <20 mm, alone or in combination with anti-inflammatory agents and other therapeutic agents. The compns. can include an appropriate carrier for oral, i.m., i.p. or i.v. administration. When administered to a patient, the particles bring about elevated levels of IL-6 and do not cause elevated levels of TNF-.alpha.. Ten mice were injected i.p. with 25 mg **bioactive glass** with a particle size <20 .mu.m in a total vol. of 1 mL (0.5 mL fetal calf serum and 0.5 mL phosphate-buffered saline) with a resulting pH of 9.6. The proinflammatory cytokine TNF-a was not detected in any of the samples. Peritoneal IL-6 concns., however, were increased 25-fold from approx. 80 pg/mL in the carrier-treated mice to over 2000 pg/mL in the **bioactive glass**-treated mice. Thus, the **bioactive glass** was bioactive when administered i.p. The **bioactive glass** was not directly pro-inflammatory and stimulated the resident cell IL-6 synthesis, which represents a new anti-inflammatory property.
RE.CNT 3
RE
(1) Acemoglu; US 6083521 A 2000 CAPLUS
(2) Litkowski; US 6086374 A 2000
(3) Marotta; US 5990380 A 1999

L13 ANSWER 5 OF 32 CAPLUS COPYRIGHT 2001 ACS
AN 2000:190879 CAPLUS
DN 132:227460
TI Anti-inflammatory and antimicrobial uses for **bioactive glass** compositions
IN Greenspan, David C.; West, Jon K.; Lee, Sean; Meyers, James L.; Diamond, Mason
PA US Biomaterials Corp., USA
SO PCT Int. Appl., 39 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000015167	A1	20000323	WO 1999-US20644	19990910
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
AU 9962447	A1	20000403	AU 1999-62447	19990910

PRAI US 1998-99725 19980910
US 1999-392516 19990909
WO 1999-US20644 19990910
AB Compns. and methods for treating **wounds** to significantly reduce

the healing time, reduce the incidence of scar formation, improve the success of **skin** grafts, reduce the inflammatory response and providing anti-bacterial treatments to a patient in need thereof, that include small non-interlinked particles of **bioactive glass** or highly porous **bioactive glass**, are disclosed. Anti-bacterial solns. derived from **bioactive glass**, and methods of prepn. and use thereof, are also disclosed. The compns. include non-interlinked particles of **bioactive glass**, alone or in combination with anti-bacterial agents and/or anti-inflammatory agents. The compns. can include an appropriate carrier for topical administration. Anti-bacterial properties can be imparted to implanted materials, such as prosthetic implants, sutures, stents, screws, plates, tubes, and the like, by incorporating small **bioactive glass** particles or porous **bioactive glass** into or onto the implanted materials. Anti-bacterial properties can also be imparted to devices used for in vitro and ex vivo cell culture by incorporating non-interlinked particles of **bioactive glass** into the devices. Anti-bacterial compns. derived from aq. exts. of **bioactive glass** are also disclosed. These compns. can be used, for example, in food prepn., solns. used for cell culture, and buffer solns., such as i.v. solns. A would was treated with a mixt. of particulate noninterlinked **bioactive glass** with a fine particle size, a topical antibiotic including sulfadiazine, and a petrolatum base carrier. After only 4 days, seepage of the **wound** was stopped and the surface of the **wound** appeared dry. If only a topical antibiotic was used to treat a **wound** in a patient with vasculitis, it would normally take about 2 seeks to stop seepage.

RE.CNT 1
RE
(1) Usbiomaterials Corporation; WO 98/11853 A1 1998

L13 ANSWER 6 OF 32 CAPLUS COPYRIGHT 2001 ACS DUPLICATE 1
AN 2000:472354 CAPLUS
DN 133:182869
TI In vitro bioactivity and gentamicin release from glass-polymer-antibiotic composites
AU Ragel, C. V.; Vallet-Regi, M.
CS Departamento de Quimica Inorganica y Bioinorganica, Facultad de Farmacia, Departamento de Quimica Inorganica y Bioinorganica, Facultad de Farmacia, Universidad Complutense, Madrid, 28040, Spain
SO J. Biomed. Mater. Res. (2000), 51(3), 424-429
CODEN: JBMRBG; ISSN: 0021-9304
PB John Wiley & Sons, Inc.
DT Journal
LA English
AB Composite materials have been prepd. from **bioactive glass** powders in the SiO2-CaO-P2O5 system, a biodegradable polymer [poly(L-lactic acid) (PLA)], a biostable polymer [polymethyl methacrylate (PMMA)], and an antibiotic [gentamicin]. The purpose of such composites is to obtain implantable materials that are able to lead to bone growth and also can, at the most crit. **inflammation**-infection step, release an antibiotic. X-ray diffraction, SEM, x-ray energy dispersive spectroscopy, and FTIR analyses after different soaking periods in SBF demonstrated the growth of an apatite-like layer on the composite surface. Therefore the **bioactive glass**-polymer-antibiotic combination used in this work does not inhibit the glass bioactivity. The release of gentamicin after a soaking of the materials in SBF was followed by UV-visible spectroscopy. A fast initial release during the first 10 h

of soaking, followed by a controlled release of the drug was obsd.
RE.CNT 28
RE
(2) Cobby, J; J Pharm Sci 1974, V63, P725 CAPLUS
(4) Davies, J; J Biomed Mater Res 1997, V36, P429 CAPLUS
(5) Fowler, B; Inorg Chem 1974, V13, P194 CAPLUS
(6) Granado, S; J Mater Chem 1997, V7, P1581 CAPLUS
(7) Ignatius, A; J Mater Sci: Mater Med 1997, V8, P753 CAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 7 OF 32 CAPLUS COPYRIGHT 2001 ACS
AN 1999:690989 CAPLUS
DN 131:303369
TI CWK peptides for efficient gene transfer
IN Bonadio, Jeffrey F.; Labhasetwar, Vinod D.; Levy, Robert J.; Rice, Kevin G.
PA The Regents of the University of Michigan, USA
SO PCT Int. Appl., 81 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9953961	A1	19991028	WO 1999-US8884	19990423
	W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	AU 9937581	A1	19991108	AU 1999-37581	19990423
	EP 1071472	A1	20010131	EP 1999-919987	19990423
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
PRAI	US 1998-65891		19980423		
	WO 1999-US8884		19990423		

AB The present invention relates to nucleic acid condensates comprising a nucleic acid bound to a polycationic peptide, and in particular a CWK (cysteine, tryptophan, lysine) polycationic peptide, and to methods of making and using such condensates. The invention further relates to novel pharmaceutical compns. comprising condensed DNA incorporated into matrixes (gene-activated matrixes) that may be utilized for delivery of nucleic acids into targeted cells. The invention further relates to methods for producing gene-activated matrixes involving the addn. of polycationic peptides, and in particular a CWK polycationic peptide, to neg. charged DNA prior to incorporation into a matrix. The invention further relates to the linkage of the polycationic peptides to ligand mols., thus permitting targeting of the DNA to specific targeted cell types. The present invention provides pharmaceutical formulations and methods that are applicable to **wound** healing and a wide variety of genetic or acquired diseases.
RE.CNT 6
RE
(1) Beug; US 5354844 A 1994 CAPLUS
(2) Bonadio; US 5763416 A 1998 CAPLUS

(3) Fang; Proc Natl Acad Sci USA 1996, V93(12), P5753 CAPLUS
(4) Hawley-Nelson; US 5736392 A 1998 CAPLUS
(5) Roth; US 5879713 A 1999 CAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 8 OF 32 CAPLUS COPYRIGHT 2001 ACS
AN 1999:483390 CAPLUS
DN 131:106851
TI **Bioactive glass** treatment of **inflammation** in **skin** conditions
IN Lee, Sean; Meyers, James L.
PA Usbiomaterials Corporation, USA
SO PCT Int. Appl., 13 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9937287	A1	19990729	WO 1999-US391	19990122
	W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	AU 9923134	A1	19990809	AU 1999-23134	19990122
	EP 1049457	A1	20001108	EP 1999-903014	19990122
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				

PRAI US 1998-12272 19980123
WO 1999-US391 19990122
AB This invention relates to a method for treating inflammatory symptoms such as burning, redness, itching, swelling and pain which accompany **skin** disorders other than **wounds** of the **skin**. The method comprising topical application of a topical medicinal compn. comprising a non-interlinked particulate **bioactive glass** mixed with a topical medicinal carrier to the site of the **skin** disorder.
RE.CNT 3
RE
(1) Bonfield; US 5728753 A 1998 CAPLUS
(2) Hench; US 5840290 A 1998 CAPLUS
(3) Shimono; US 5766611 A 1998 CAPLUS

L13 ANSWER 9 OF 32 CAPLUS COPYRIGHT 2001 ACS
AN 1999:636052 CAPLUS
DN 131:253369
TI In vivo gene transfer methods for **wound** healing
IN Goldstein, Steven A.; Bonadio, Jeffrey
PA The Regent of the University of Michigan, USA
SO U.S., 31 pp., Cont.-in-part of U.S. Ser. No. 316,650.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 5

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

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PI	US 5962427	A	19991005	US 1996-631334	19960412
	US 5763416	A	19980609	US 1994-199780	19940218
	US 5942496	A	19990824	US 1994-316650	19940930
	WO 9522611	A2	19950824	WO 1995-US2251	19950221
	WO 9522611	A3	19960208		

W: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LU, LV, MD, MG, MN, MW, MX, NL, NO, NZ, PL, PT, RO, RU, SD, SE, SI, SK, TJ, TT, UA, UG

RW: KE, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG

	CA 2251655	AA	19971023	CA 1997-2251655	19970411
	WO 9738729	A1	19971023	WO 1997-US7301	19970411

W: AL, AM, AU, AZ, BA, BB, BG, BR, BY, CA, CN, CU, CZ, EE, GE, GH, HU, IL, IS, JP, KG, KP, KR, KZ, LC, LK, LR, LT, LV, MD, MG, MK, MN, MX, NO, NZ, PL, RO, RU, SG, SI, SK, TJ, TM, TR, TT, UA, UZ, VN, YU, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG

	AU 9728212	A1	19971107	AU 1997-28212	19970411
	AU 710386	B2	19990916		
	EP 892644	A1	19990127	EP 1997-922578	19970411

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI

	CN 1226835	A	19990825	CN 1997-195326	19970411
	NO 9804729	A	19981214	NO 1998-4729	19981009

PRAI	US 1994-199780	19940218
	US 1994-316650	19940930
	WO 1995-US2251	19950221
	US 1996-631334	19960412
	WO 1997-US7301	19970411

AB The present invention relates to an in vivo method for specific targeting and transfer of DNA into mammalian repair cells. The method involves implanting a matrix contg. DNA of interest into a fresh **wound** site, wherein the matrix acts as a scaffolding that promotes cell growth, and in turn, gene transfer. Repair cells, which normally originate in viable tissue surrounding the **wound**, proliferate and migrate into the gene activated matrix, wherein they encounter, take up, and express the DNA. Transfected repair cells, therefor act as in situ bioreactors which produce DNA-encoded agents that heal the **wound**. The transferred DNA may include any DNA encoding a therapeutic protein of interest. The invention further relates to pharmaceutical compns. that may be used in the practice of the invention to transfer the DNA of interest.

RE.CNT 50

RE

(1) Agarwala, N; Journal of Bone and Mineral Research 1992, V7, P531 CAPLUS
(2) Anon; WO 9003733 1990 CAPLUS
(3) Anon; WO 9011092 1990 CAPLUS
(4) Anon; WO 9014074 1990 CAPLUS
(6) Anon; WO 9117424 1991 CAPLUS

ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 10 OF 32 CAPLUS COPYRIGHT 2001 ACS DUPLICATE 2

AN 1999:383054 CAPLUS

DN 131:175013

TI Comparison of **bioactive glass** to demineralized freeze-dried bone allograft in the treatment of intrabony defects around implants in the canine mandible

AU Hall, E. Ellen; Meffert, Roland M.; Hermann, Joachim S.; Mellonig, James T.; Cochran, David L.

CS Department of Periodontics, University of Texas Health Science Center, San Antonio, TX, USA

SO J. Periodontol. (1999), 70(5), 526-535
CODEN: JOPRAJ; ISSN: 0022-3492

PB American Academy of Periodontology

DT Journal

LA English

AB The purpose of this study was to evaluate and compare the healing of different bone grafting materials adjacent to titanium plasma-sprayed (TPS) endosseous dental implants. Implant osteotomy sites were prepd. and standardized 3-walled intrabony defects (3 mm .times. 5 mm .times. 5 mm) were created at the mesial of each implant site. Thirty-two TPS implants were placed in edentulous mandibular ridges of the 4 dogs. Periodontal dressings were placed in the defect sites so as to create a defect simulating bone loss around an implant. After 3 mo, the periodontal dressing was removed, the defect sites debrided and evaluated for size, and intramarrow penetration performed. The graft materials tested were canine demineralized freeze-dried bone allograft (cDFDBA); **bioactive glass** granules of a broad size range 90 to 710 .mu. (BRG); and **bioactive glass** granules of narrow size range 300 to 355 .mu. (NRG). One site on each side of the mandible was not filled and served as a control. Dogs were sacrificed 4 mo after graft placement. Histol., differences in percent bone-to-implant contact in the defect area were obsd. between the treatment groups. CDFDBA>control=BRG=NRG with statistical significance found between cDFDBA and control, but no statistically significant difference between control or either **bioactive glass** material. When comparing percent bone height fill of the defect in the grafted area, cDFDBA (65.7%) was significantly better than the control (48.9%) with no statistically significant difference between control, broad range **bioactive glass** (57.3%) and narrow range **bioactive glass** (56.6%). When total bone area was measured, the percentage of new bone in the grafted area was cDFDBA (42.1%), broad range glass (33.1%) and narrow range glass (22.6%) with significance found between cDFDBA and NRG (P = 0.0102). The content of residual graft particles in soft tissue was significant (P = 0.0304) between cDFDBA (1.4%) and NRG (11.4%) with no significant difference between graft material for residual particle content in bone tissue. The results of this study indicate that percent bone-to-implant contact and percent bone height fill in an intrabony defect around titanium plasma-sprayed implants are statistically significantly higher with the use of DFDBA when compared to **bioactive glass** material.

RE.CNT 20
RE
(1) Arvidson, K; Int J Oral Maxillofac Surg 1990, V5, P127 MEDLINE
(5) Donnenfeld, O; J Periodontol 1970, V41, P131 MEDLINE
(7) Fucini, S; J Periodontol 1993, V64, P844 MEDLINE
(8) Furusawa, T; Implant Dent 1997, V6, P93 MEDLINE
(11) Johansson, C; Int J Oral Maxillofac Implants 1987, V2, P69 MEDLINE
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 11 OF 32 MEDLINE

AN 1999237906 MEDLINE
DN 99237906

TI In vivo comparison of synthetic osseous graft materials. A preliminary study.
AU MacNeill S R; Cobb C M; Rapley J W; Glaros A G; Spencer P
CS Department of Periodontics, School of Dentistry, University of Missouri-Kansas City, 64108, USA.. macneills@umkc.edu
SO JOURNAL OF CLINICAL PERIODONTOLOGY, (1999 Apr) 26 (4) 239-45. Journal code: HT7. ISSN: 0303-6979.
CY Denmark
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals; Dental Journals
EM 199908
EW 19990802
AB The purpose of this study was to compare the in vivo osseous healing response of 4 commercially-available synthetic bone grafting materials; hydroxylapatite (HA), calcium sulfate (CaSO4) plus autogenous bone, or a **bioactive glass** ceramic: with particle size of 300-360 microm (BG1) or 90 to 710 microm (BG2). 4 osteotomy sites were prepared in each tibia of 10 adult male rabbits. One unfilled osteotomy site served as negative control (NC) and another site filled with autogenous bone was the positive control (PC). All animals received BG1 in 2 sites and BG2 in 2 sites. 5 animals received HA and five CaSO4 plus autogenous bone in the remaining 2 sites. Animals were sacrificed at 28 days post-surgery, histologic sections obtained and the % surface area of new bone formation for each material was determined by computerized image analysis. All graft sites showed evidence of bone formation, i.e., (NC) 41.95%; (PC) 50.41%; (BG1) 41.82%; (BG2) 40.36%; (HA) 41.83% and (CaSO4) 58.83%. Statistical analysis using an ANOVA with repeated measures on the materials common to all animals (excluding HA and CaSO4 groups) showed significant differences between materials in surface area of bone, with positive controls better than negative controls, and BG1 and BG2 not significantly different from the negative control. These results indicate that synthetic graft materials can support new bone formation in surgically prepared defects. The utility of a rabbit model for studying physiologic osseous turnover and healing is questioned for studies of slowly resorbing synthetic graft materials.

L13 ANSWER 12 OF 32 MEDLINE
AN 1999193746 MEDLINE
DN 99193746
TI [Modification of bacterial growth by alloplastic bone substitutes]. Zur Beeinflussung des Bakterienwachstums durch alloplastische Knochenersatzmaterialien.
AU Geyer G; Schott C; Schwarzkopf A
CS HNO-Klinik Solingen.
SO HNO, (1999 Jan) 47 (1) 25-32. Journal code: G9P. ISSN: 0017-6192.
CY GERMANY: Germany, Federal Republic of
DT Journal; Article; (JOURNAL ARTICLE)
LA German
FS Priority Journals
EM 199909
EW 19990902
AB BACKGROUND: To determine the applicability of alloplastic materials as bone substitutes it is now standard procedure to test materials for possible toxic effects and to study their behavior in animal models and cell cultures. This is especially important with respect to middle ear implants that can be put at risk by recurrent infections and require additional testing in a bacterially contaminated environment. MATERIALS

AND METHODS: In the present study ionomeric cement (V-O CEM), **bioactive glass** ceramic and hydroxyapatite were subjected to contamination with S. aureus, E. coli, Pr. mirabilis, Ps. aeruginosa and Enterococci using agar diffusion and microbial suspension tests and examined for their antibacterial activity. A special feature of V-O CEM that had to be considered was that it could be implanted in two physical states (as a viscous substance and a fully hardened material). RESULTS: The agar diffusion test showed that an antibacterial effect of freshly mixed V-O CEM was demonstrable for up to 60 min. In the microbial suspension test growth of E. coli was found to be promoted after 48-h incubation by V-O CEM set for 1 h. S. aureus exhibited a depressed growth, while Pseudomonas cultures demonstrated cell death after 48 h. V-O CEM set for 24 h and 7 days, respectively, exerted a similar though less pronounced effect. Using the microbial suspension test, a comparison was also made of the antibacterial activities of 24-h V-O CEM, **bioactive glass** ceramic and hydroxyapatite against cultures of S. aureus, Pseudomonas and E. coli. The inhibitory effect of hydroxyapatite on the growth of S. aureus was found to persist beyond the 48-h incubation period. There was slight growth of E. coli in the presence of **bioactive glass** ceramic after 48 h, whereas hydroxyapatite produced inhibition of microbial growth. V-O CEM inhibited the growth of Pseudomonas, unlike **bioactive glass** ceramic and hydroxyapatite, which transiently promoted bacterial growth. DISCUSSION AND CONCLUSIONS: Our findings showed that V-O CEM, **bioactive glass** ceramic and hydroxyapatite exhibited material-dependent bacterial colonization and thus resembled polymeric bone substitutes (susceptible to invasion by S. epidermidis) and metals (sensitive to S. aureus). In general, users of bone substitutes should conduct preclinical tests in order to obtain advance information on the properties of possible replacement material. Since there can be varying interactions between the materials studied and bacterial growth, material-specific effects on bacterial growth should be investigated. While it is recognized that in vitro studies are an inadequate simulation of the clinical situation, they still provide some insight into the likely behavior of a bone substitutes in human sites.

L13 ANSWER 13 OF 32 CAPLUS COPYRIGHT 2001 ACS
AN 1998:624020 CAPLUS
DN 129:250241
TI Bone paste comprising a bioabsorbable osteogenic compound in a gelatin matrix
IN Wironen, John F.; Grooms, Jamie M.
PA University of Florida Tissue Bank, Inc., USA; University of Florida Research Foundation, Inc.
SO PCT Int. Appl., 39 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9840113	A1	19980917	WO 1998-US4904	19980312

W: AL, AU, BA, BB, BG, BR, CA, CN, CU, CZ, EE, GE, GW, HU, ID, IL, IS, JP, KP, KR, LC, LK, LR, LT, LV, MG, MK, MN, MX, NO, NZ, PL, RO, SG, SI, SK, SL, TR, TT, UA, US, UZ, VN, YU, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG

AU 9865528 A1 19980929 AU 1998-65528 19980312
EP 984797 A1 20000315 EP 1998-911607 19980312
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI
PRAI US 1997-816079 19970313
WO 1998-US4904 19980312
AB A bone paste useful in the orthopedic arts, for example in the repair of non-union fractures, periodontal ridge augmentation, craniofacial surgery, implant fixation, impaction grafting, or any other procedure in which generation of new bone is deemed necessary, is provided by a compn. comprising a substantially bioabsorbable osteogenic compd. in a gelatin matrix. In various embodiments, the osteogenic compd. is selected from (1) demineralized bone matrix (DBM); (2) **bioactive glass** ceramic, Bioglass, bioactive ceramic, calcium phosphate ceramic, hydroxyapatite, hydroxyapatite carbonate, corraline hydroxyapatite, calcined bone, tricalcium phosphate, or like material; (3) bone morphogenetic protein, TGF-.beta., PDGF, or mixts. thereof, natural or recombinant; and (4) mixts. of (1)-(3). The bone paste contains dry demineralized bone 0-40, lyophilized thermally crosslinkable gelatin 20-45, Bioglass 0-40%, and bone morphogenic protein 0.001 mg/mL. The bone paste was osteoinductive when implanted in rats.

L13 ANSWER 14 OF 32 CAPLUS COPYRIGHT 2001 ACS
AN 1999:75874 CAPLUS
DN 130:257300
TI Soft tissue response to glycerol-suspended controlled-release glass particulate
AU Cartmell, S. H.; Doherty, P. J.; Hunt, J. A.; Healy, D. M.; Gilchrist, T.
CS Department of Clinical Engineering, University of Liverpool, Liverpool, L69 3GA, UK
SO J. Mater. Sci.: Mater. Med. (1998), 9(12), 773-777
CODEN: JSMMEL; ISSN: 0957-4530
PB Kluwer Academic Publishers
DT Journal
LA English
AB Vesicoureteral reflux and urinary incontinence have previously been treated by various means including the endoscopic delivery of injectable bulking materials such as silicone micro-implants, PTFE implants, glass particles, fat and bovine collagen. These first three materials do not degrade and collagen requires frequently repeated injections in order to sustain the restored continence provided. Vesicoureteric reflux in children usually resolves independently before the age of five. Correction is required before this, because treatment by prophylactic antibiotics is frequently unsuccessful in preventing breakthrough infection. The ideal material for injection should have large particles to avoid migration, inject easily and controllably, be non-toxic and dissolve over the period of time by which time the kidney will be mature. Three different controlled-release glass (CRG) granule compns. have been prepd. by Giltech Ltd, and suspended in a suitable carrier medium (in this case glycerol). The degradable glasses, which have two different size ranges of 200-300 and < 53 .mu.m, and three different soln. rates, were injected i.m. into the dorso-lumbar region of rats. Histol. anal. of cryostat cut section after time periods of 2 d, 4 and 9 wk, and 6 mon has been performed. Histol. sections were stained for neutrophils and macrophages using enzyme histochem. ED1 (monocytes and immature macrophages), ED2 (mature tissue macrophages), CD4 (helper/inducer T-lymphocytes and macrophages), CD8 (suppresser/cytotoxic T-lymphocytes), Interleukin-1.beta., IL-2 (activated T-lymphocytes), Major Histocompatibility Complex (MHC) class II (activated macrophages and

activated B-lymphocytes), .alpha.-.beta. (T-lymphocytes) and CD45RA (B lymphocytes) antibodies have beed used to stain immunohistochem. each sample. This study demonstrates that particulate, degrading glass is stimulating an inflammatory response in soft tissue at time periods up to 6 mon. It should be noted that very small particulate, fast degrading glass is leading to tissue necrosis and should not be considered further for these applications. However, larger particulate, slower degrading materials are demonstrating effective potential for stress incontinence applications.

RE.CNT 14
RE
(1) Allen, W; Vet Record 1984, V115, P55 MEDLINE
(2) Allen, W; Vet Record 1985, P175 CAPLUS
(4) Burnie, J; Biomaterials 1981, V2, P244 CAPLUS
(9) Gilchrist, T; Biomaterials 1991, V12, P76 CAPLUS
(13) Schedle, A; J Biomed Sci Res 1998, V39, P560 CAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 15 OF 32 CAPLUS COPYRIGHT 2001 ACS
AN 1997:433647 CAPLUS
DN 127:55943
TI Bioactive composite material for repair of hard and soft tissues
IN Bonfield, William; Wang, Min; Hench, Larry L.
PA Bonfield, William, UK; Wang, Min; Hench, Larry L.
SO PCT Int. Appl., 28 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9717401	A1	19970515	WO 1996-US17939	19961108
	W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	US 5728753	A	19980317	US 1995-556016	19951109
	CA 2237148	AA	19970515	CA 1996-2237148	19961108
	AU 9677246	A1	19970529	AU 1996-77246	19961108
	EP 859813	A1	19980826	EP 1996-940339	19961108
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
	CN 1207753	A	19990210	CN 1996-199574	19961108
	JP 2000500174	T2	20000111	JP 1997-518342	19961108
	US 5962549	A	19991005	US 1997-987469	19971209
PRAI	US 1995-556016		19951109		
	WO 1996-US17939		19961108		

AB Composites suitable for use as prostheses for attachment to soft tissues, such as cartilage, tendons, **skin**, tympanic membrane and gingiva, as well as cancellous or trabecular bone, are based on combination of a polyolefinic binder with certain **bioactive glass** materials. The composites bond actively with soft tissues and are readily formulated to achieve mech. properties comparable to those of the soft tissue of interest. A composite was prepd. from HDPE and 45S5 Bioglass particles ranging in size 1.5-150 .mu.m, in particle/binder vol. ratios of

.ltoreq.30 %. Subsequent processing of the composites into specific compression-molded shapes preserved the dispersion of the **bioactive glass** phase. The composite exhibited levels of elastic compliance, tensile strength, and fracture strain comparable to those of soft connective tissues.

L13 ANSWER 16 OF 32 MEDLINE
AN 1999172686 MEDLINE
DN 99172686
TI Clinical study of **bioactive glass** ceramics as orbital implants.
AU Xu X; Huang Z; Wang C
CS Department of Ophthalmology, Xiangya Hospital, Hunan Medical University, Changsha.
SO HU-NAN I KO TA HSUEH HSUEH PAO [BULLETIN OF HUNAN MEDICAL UNIVERSITY], (1997) 22 (5) 440-2.
Journal code: CM9. ISSN: 1000-5625.
CY China
DT Journal; Article; (JOURNAL ARTICLE)
LA Chinese
EM 199906
EW 19990604
AB One hundred and two patients received a **bioactive glass** ceramics as an orbital implant of 98 cases 96.1% were successful after operation. Of 4 cases that underwent operation, conjunctiva was torn partly when stitches were taken out of the **wound**. One out of four had to remove the orbital implant. After a follow-up of 6 months to 2 years, there were no complications. All patients were satisfied with their cosmetic appearance and motility although drilling of the motility hole as a secondary procedure was not peformed.

L13 ANSWER 17 OF 32 MEDLINE
AN 1998118706 MEDLINE
DN 98118706
TI The in vitro and in vivo indomethacin release from self-setting **bioactive glass** bone cement.
AU Otsuka M; Nakahigashi Y; Matsuda Y; Kokubo T; Yoshihara S; Fujita H; Nakamura T
CS Department of Pharmaceutical Technology, Kobe Pharmaceutical University, Japan.. m-otsuka@kobepharma-u.ac.jp
SO BIO-MEDICAL MATERIALS AND ENGINEERING, (1997) 7 (5) 291-302.
Journal code: BNH. ISSN: 0959-2989.
CY Netherlands
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199805
EW 19980502
AB The in vivo and in vitro drug release profiles from a self-setting bioactive CaO-SiO2-P2O5 glass bone cement containing indomethacin as a model drug were investigated. The cement containing 2% and 5% indomethacin (IMC) powder hardened within 5 min after mixing with ammonium phosphate buffer. After setting, in vitro drug release from drug-loaded cement pellets in a simulated body fluid (SBF) at pH 7.25 and 37 degrees C continued for two weeks. The hardened cement gradually formed low-crystallinity hydroxyapatite during the drug release test in SBF. An IMC-loaded cement device (2% and 5% drug) was implanted in the subcutaneous tissue on the back of rats. The in vivo IMC release from the cement increased and attained maximum levels (Cmax of 2% and 5%

drug-loaded cements was 0.27 and 3.37 micrograms/ml, respectively) at Tmax, 3 and 0.5 d, respectively, upon subcutaneous (s.c.) administration in rats. This suggested that the s.c. administration of the cement provided IMC release for a much longer period than s.c. administration of the solution, and the plasma IMC concentration was dependent on the drug concentration in the cement. The plasma IMC concentration and the area under the curve from 2% and 5% IMC-loaded cements in rats were dependent on the concentration of IMC in the cements. The in vivo IMC concentration in plasma obtained by the deconvolution method was much lower than that delivered in SBF in vitro. Scanning electron microscopy and photomicrographs of cross sections showed that the bioactive bone cement had excellent biocompatibility with the surrounding soft tissues.

L13 ANSWER 18 OF 32 MEDLINE
AN 97258220 MEDLINE
DN 97258220
TI Histomorphometric and molecular biologic comparison of **bioactive glass** granules and autogenous bone grafts in augmentation of bone defect healing.
AU Virolainen P; Heikkila J; Yli-Urpo A; Vuorio E; Aro H T
CS Department of Surgery, University of Turku, Finland.
SO JOURNAL OF BIOMEDICAL MATERIALS RESEARCH, (1997 Apr) 35 (1) 9-17. Journal code: HJJ. ISSN: 0021-9304.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199709
EW 19970901
AB The applicability of **bioactive glass** (BG) granules as a substitute for bone grafts was tested by comparing the histologic, histomorphometric, and molecular biologic healing patterns to those of bone autografts and ungrafted bone defects in a rat model. The cellular response in defects filled with BG granules was characterized by continuous overexpression of type III collagen. Osteogenic mesenchymal cells, prior to their differentiation to osteoblasts, organized as a dense periosteumlike layer on the surface of the BG granules. By day 14 new bone formation was more extensive in autografted defects than in BG filled defects ($p = 0.039$). No cartilage-specific type II collagen mRNA was detectable, confirming the uniformity of intramembranous bone formation. The difference in the initiation of new bone formation was further confirmed by the mRNA analyses of the de novo production of TGF-beta 1 and type I collagen. Autografted defects demonstrated the highest levels of TGF-beta 1 and type I collagen mRNAs during the first 2 weeks of healing, whereas BG-filled defects showed biphasic expression patterns of the same genes. Spontaneous new bone formation in ungrafted bone defects was also characterized by biphasic expression of type I collagen gene. Osteonectin mRNA declined gradually over time in autografted and BG filled defects, whereas unfilled defects showed a gradual increase of osteonectin mRNA during healing. By 8 weeks, about 70% of the BG surface showed evidence of direct new bone contact. Energy-dispersing X-ray analyses confirmed the presence of silica-rich and CaP-rich zones at the bonding interface. In conclusion, the osteoconductive surface of **bioactive glass** granules efficiently bonds to ongrowing new bone but the material does not reach the capacity of autogenous bone graft in promotion of osteogenesis.

L13 ANSWER 19 OF 32 CAPLUS COPYRIGHT 2001 ACS
AN 1996:315343 CAPLUS

DN 124:352805
TI Incorporation of biologically active molecules into bioactive glasses
IN Ducheyne, Paul; Radin, Shulamith; Santos, Erick Manuel
PA Trustees of the University of Pennsylvania, USA
SO PCT Int. Appl., 79 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9603117	A1	19960208	WO 1995-US9401	19950726
	W: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LU, LV, MD, MG, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TT				
	RW: KE, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	US 5591453	A	19970107	US 1995-477585	19950607
	AU 9531470	A1	19960222	AU 1995-31470	19950726
	EP 772436	A1	19970514	EP 1995-927435	19950726
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
	JP 10503210	T2	19980324	JP 1995-505948	19950726
	US 5861176	A	19990119	US 1996-772817	19961224
	US 5871777	A	19990216	US 1997-848966	19970502
	US 5849331	A	19981215	US 1997-922622	19970903

PRAI US 1994-281055 19940727
US 1995-406047 19950317
US 1995-477585 19950607
US 1995-458450 19950602
US 1995-458456 19950602
WO 1995-US9401 19950726
US 1996-772817 19961224

AB Carriers comprising silica-based glass providing for the controlled release of biol. active mols., their methods of prepn., and methods of use are disclosed. The carriers are prepd. using a sol-gel-derived process. Biol. active mols. are incorporated within the matrix of the glass during prodn. Tetramethylorthosilicate 19.6, water 14.2, methanol 5.2, and N HCl 0.01 mL was sonicated in an ice bath for 30 min, then 4 mL of the sol was cast into 23 mm diam. polystyrene vials and 1 mL of 10 mg/mL vancomycin HCl was added to the sols in the vials and the samples were mixed followed by addn. of 1 mL water. The vials were sealed, gelled, aged, and dried at room temp., then crushed and ground and sieved to obtain small granules in a size range .apprx.500-700.mu.m. Most of vancomycin was released during the first day and the release was 100% by day 6.

L13 ANSWER 20 OF 32 CAPLUS COPYRIGHT 2001 ACS DUPLICATE 3
AN 1995:493053 CAPLUS
DN 122:248255
TI Characterization of nodules induced by **bioactive glass** on cultured periodontal-ligament fibroblasts
AU Kubo, Kohji; Kamada, Tetsuro; Matsuyama, Takashi; Tsukasa, Nobuyuki; Uehara, Mayumi; Izumi, Yuichi; Kitano, Motoo; Ogino, Makoto; Sueda, Takeshi
CS Dep. of Peridontology, Kagoshima Univ. Dental School, Kagoshima, Japan
SO J. Biomed. Mater. Res. (1995), 29(4), 503-9
CODEN: JBMRBG; ISSN: 0021-9304
DT Journal

LA English
AB We previously reported that materials leached from **bioactive glass** (BG) and vitamin D3 induced the formation of nodules on cultured periodontal-ligament fibroblasts (PLF). In this study, we have investigated the relationship between the conditions of the materials and nodule formation, analyzed morphol., and also studied whether the prodn. of nodules was specific to cultured PLF. PLF and **skin** fibroblasts were cultured in the presence or absence of BG. The amts. of calcium, phosphate, sodium and silicon in the culture medium and the no. of nodules were measured at the 55th day. The nodules were obsd. microscopically and analyzed using an x-ray microanalyzer. In PLF, nodules were formed regardless of the presence or absence of BG; however, they were more numerous in the presence of BG. In **skin** fibroblasts, nodules were not obsd. The amts. of calcium and silicon were higher in the presence of BG, while the amt. of phosphate was lower. The nodules appeared cryst. with a spongy structure and contained calcium and phosphorus. Our results show that the nodules were assocd. with PLF and pptd. by the materials (higher concns. of calcium and silicon), and they were spongy crystal composed of calcium and phosphorus.

L13 ANSWER 21 OF 32 MEDLINE
AN 94120924 MEDLINE
DN 94120924
TI **Bioactive glass** versus hydroxylapatite in reconstruction of osteochondral defects in the rabbit.
AU Heikkila J T; Aho A J; Yli-Urpo A; Andersson O H; Aho H J; Happonen R P
CS Turku University, Department of Surgery, Finland..
SO ACTA ORTHOPAEDICA SCANDINAVICA, (1993 Dec) 64 (6) 678-82.
Journal code: 1GO. ISSN: 0001-6470.
CY Denmark
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199404
AB We studied osseointegration of a **bioactive glass** (BG) and hydroxylapatite (HA) in rabbit femur epiphyseal and metaphyseal regions. 17 BG and 24 HA cones implanted in defects through arthrotomy were analyzed. The holes for implants were drilled through distal femur joint surfaces. The cartilage **wound** repaired generally by fibrous tissue. Histomorphometry showed that 61, 78, and 79 percent of BG surface was covered by bone at 3, 6, and 12 weeks, respectively. The corresponding figures for HA were 47, 67, and 78 percent. Chemical bonding between bone and implants of both types was confirmed by scanning electron microscopy (SEM) and energy-dispersive x-ray analysis (EDXA). Formation of a calcium phosphate-rich layer on the surface BG implant was demonstrated by EDXA. Our results indicate that the osseointegration rate of **bioactive glass** does not differ from that of hydroxylapatite.

L13 ANSWER 22 OF 32 MEDLINE
AN 95063676 MEDLINE
DN 95063676
TI [Clinical use of BAS-O, a **bioactive glass** ceramic, for filling cystic cavities in stomatology].
Klinicka aplikace bioaktivni sklokeramiky BAS-O pro vyplne cystickych dutin ve stomatologii.
AU Pavek V; Novak Z; Strnad Z; Kudrnova D; Navratilova B
CS II. stomatologicka Klinika, 1. Lekarske Fakulty, Univerzity Karlovy, Praha, Czech Republic.

SO SBORNIK LEKARSKY, (1993) 94 (3) 239-48.
Journal code: UAW. ISSN: 0036-5327.
CY Czech Republic
DT Journal; Article; (JOURNAL ARTICLE)
LA Czech
EM 199502
AB The **bioactive glass**-ceramic material BAS-0 and results of clinical testing of this material in stomatology are described. The granules of **bioactive glass**-ceramic BAS-0 were chosen for implantation into cyst cavities in jaw-bones. Radiological evaluations were carried out after 3, 6 and 12 months. Altogether 37 radiographs of 23 patients were evaluated. The symptoms of ossification were proved in 28 cases (75.7%), 5 radiographs (13.5%) were without visible apposition of the bone and in 4 cases the loss of the BAS-0 granules from operation **wound** was observed (10.8%). The authors proved very good healing properties and tolerance of BAS-0 material, no significant changes in biochemical and haematology examinations were observed.

L13 ANSWER 23 OF 32 CAPLUS COPYRIGHT 2001 ACS DUPLICATE 4
AN 1995:223458 CAPLUS
DN 122:17099
TI A new bioactive bone cement consisting of BIS-GMA resin and **bioactive glass** powder
AU Kawanabe, Keiichi; Tamura, Jiro; Yamamuro, Takao; Nakamura, Takashi; Kokubo, Tadashi; Yoshihara, Satoru
CS Faculty of Medicine, Kyoto University, Kyoto, 606, Japan
SO J. Appl. Biomater. (1993), 4(2), 135-41
CODEN: JABIEW; ISSN: 1045-4861
DT Journal
LA English
AB We have developed a bioactive bone cement consisting of silane-treated CaO-SiO2-P2O5-CaF2 glass powder as the filling particles and bisphenol-a-glycidyl methacrylate (BIS-GMA) dild. with triethylene glycol dimethacrylate (TEGDMA) as the org. matrix. Histol. examn. demonstrated direct bonding between the cement and bone along the circumference of the cement at 4 wk after implantation in rat tibia. The compressive strength and toughness of the cement were two and four times greater than those of polymethylmethacrylate (PMMA) cement, resp. The inflammatory reaction of the **skin** caused by the new cement was not as intense as that for PMMA 3 days after s.c. implantation. This new cement may be applicable as a bioactive bone cement with high mech. strength.

L13 ANSWER 24 OF 32 MEDLINE
AN 93269546 MEDLINE
DN 93269546
TI [Initial clinical experience with BAS O, a **bioactive glass**-ceramic material (see comments)].
Prvni klinicke zkusenosti s bioaktivnim sklo-keramickym materialem BAS O.
CM Comment in: Acta Chir Orthop Traumatol Cech 1993;60(5):320
AU Urban K; Stehlik J
CS Ortopedicka klinika lekarske fakulty KU, Hradec Kralove.
SO ACTA CHIRURGIAE ORTHOPAEDICAE ET TRAUMATOLOGIAE CECHOSLOVACA, (1993) 60 (1) 40-6.
Journal code: 0J2. ISSN: 0001-5415.
CY Czech Republic
DT Journal; Article; (JOURNAL ARTICLE)
LA Czech
EM 199308
AB The authors describe a group of patients where the surgical operation

involved among others filling of bone defects with glass-ceramic material--dense (as granules) or porous (as a block). Glass-ceramics BAS O were developed in the laboratories of LASAK Co. in Prague. Two defects were of traumatic origin and osteosynthesis was part of three operations. The remaining defects were juvenile bone cysts, fibrous dysplasia and benign bone tumours. The follow-up period after operation varied in the first 11 patients between 6 months and 2 years. In patients of the mentioned group no problems of healing of the surgical **wound** were recorded nor allergic and side-reactions. The incorporation of glass-ceramic material was followed up by X-ray after three-months intervals. In no instance lighter areas were found on the X-ray pictures suggesting a fibrous outer layer. On the contrary, the trabeculae reached gradually its close vicinity. Based on experience from experimental work and investigation of X-ray signs of healing, the patients were allowed to burden the operated extremity after three months. The basic laboratory examinations made in these patients were within the normal range. In particular calcium throughout the investigation period in the normal range, the phosphorus levels varied near the upper borderline, alkaline phosphatase levels were in many young patients elevated and acid phosphatases varied. In eight patients during the postoperative period eosinophilia was revealed in the haemogram.

L13 ANSWER 25 OF 32 CAPLUS COPYRIGHT 2001 ACS
AN 1994:144090 CAPLUS
DN 120:144090
TI Preparation and studies of **bioactive glass**-ceramic containing Zn
AU Guo, Lipid; Li, Lihua; Lei, Jiaheng; Mu, Shanbin
CS Dep. Mater. Eng., Wuhan Univ. Technol., Wuhan, Peop. Rep. China
SO Wuhan Gongye Daxue Xuebao (1993), 15(1), 27-33
CODEN: WGDXEY; ISSN: 1000-2405
DT Journal
LA Chinese
AB In present work, a new kind of **bioactive glass**-ceramic for artificial bones is prepd. with ZnO-MgO-CaO-B2O3-SiO2-P2O5 system, which can help **wound** healing and increase the immunity of human bodies by introducing ZnO. The compns. of glasses and melting condition, crystg. characteristics and heat treatment technique, effect of Zn content on properties of material and biocompatibility and bioactivity of material were investigated systematically. The exptl. results indicated that material, with oxyapatite and wollastonite as main crystal phases, has high mech. strength (bending strength 170 MPa, compressive strength 500 MPa) and fine chem. stability, Zn2+ ions released slowly out of glass-ceramic sample in simulated physiol. soln., which was beneficial to **wound** healing. The animal expt. proved that material has good biocompatibility and bioactive.

L13 ANSWER 26 OF 32 CAPLUS COPYRIGHT 2001 ACS
AN 1996:172377 CAPLUS
DN 124:270473
TI Preparation and study of **bioactive glass**-ceramics containing Zn
AU Guo, Liping; Lei, Jiaheng; Li, Lihua; Mu, Shanbin
CS Dpte. Material Engineering, Wuhan University Technology, Peop. Rep. China
SO J. Wuhan Univ. Technol., Mater. Sci. Ed. (1993), 8(3), 14-23
CODEN: JWUTE8; ISSN: 1000-2413
DT Journal
LA English
AB In present work, a new kind of **bioactive glass**-ceramic

material for artificial bone was prepd. in the ZnO-MgO-CaO-B2O3-SiO2-P2O5 system, which can promote the **wounds** to heal and increase the immunity of human bodies by introducing a small amt. of ZnO. The compns. of the glasses and melting conditions, crystn. characteristics and heat treatment technique, the effects of Zn content on properties, bioactivity and biocompatibility of glass-ceramic material were investigated. The material, with wollastonite (.beta.-CaSiO3) and hydoxyapatite (Ca10 (PO4)6O) as main crystal phases, has a relatively high mech. strength (bending strength 170 MPa, compressive strength 500 MPa, resp.) and fine chem. stability. Zn ions released slowly out of glass-ceramic sample in a simulated physiol. soln., which is beneficial to healing of **wounds** . The animal tests showed that the material has good bioactivity and biocompatibility.

L13 ANSWER 27 OF 32 CAPLUS COPYRIGHT 2001 ACS
AN 1992:113613 CAPLUS
DN 116:113613
TI Injectable **bioactive glass** compositions and methods for tissue reconstruction
IN Walker, Dixon R.; Hench, June Wilson; Ramer, Marc; Hench, Larry L.
PA University of Florida, USA
SO PCT Int. Appl., 28 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 9117777	A2	19911128	WO 1991-US3596	19910522
WO 9117777	A3	19920109		

W: CA, JP
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LU, NL, SE
PRAI US 1990-526638 19900522
AB An injectable hyaluronic acid (I) particulate glass compn. useful for the repair, reconstruction, replacement, augmentation or reconfiguration of hard bone or soft tissue anat. structures is disclosed. A **bioactive glass** compn. contg. SiO2 45, CaO 24.5, Na2O 24.5, P2O5 6% having particle sizes from 100-355 .mu.m were suspended in I and injection of 0.1 mL was made into the dome of the bladder in rabbits; s.c. of suspension of I alone may also made and the rabbits were killed after 12 wk. S.c. sites were examd. and were completely normal and the material could not be detected by histolog. techniques. The particles were present in the bladder wall between muscle fibers underlying the urothelium. They were surrounded by collagen fibers and cellular connective tissue at all times up to 12 wk. There was no **inflammation** around the site and the overlying urothelium was normal.

L13 ANSWER 28 OF 32 MEDLINE
AN 92900193 MEDLINE
DN 92900193
TI A **bioactive glass** powder-ammonium hydrogen phosphate composite for repairing bone defects.
AU Taguchi Y; Yamamuro T; Nakamura T; Nishimura N; Kokubo T; Takahata E; Yoshihara S
CS Department of Orthopaedic Surgery, Kyoto University, Japan.
SO JOURNAL OF APPLIED BIOMATERIALS, (1990 Fall) 1 (3) 217-23.
Journal code: BCT. ISSN: 1045-4861.
CY United States

DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS T
EM 199205
AB **Bioactive glass** powder (AW-G) was made into a rigid compound by mixing with ammonium hydrogen phosphate and was evaluated as a bone-defect filler. The proximal metaphysis of the rat tibia was drilled and packed with (a) polymethyl-methacrylate (PMMA) bone cement, (b) AW-G powder, (c) AW-G powder with ammonium hydrogen phosphate (AW-G)-(A-P), or (d) nothing, as a control. The animals, with different implantation periods up to 24 weeks, were sacrificed and the defective sites were histologically analyzed. The results revealed direct bonding between the bone tissue and the (AW-G)-(A-P). The general inflammatory reaction of (AW-G)-(A-P) was less than that of PMMA bone cement. The compressive strength of (AW-G)-(A-P) implanted subcutaneously into rats was measured chronologically and deterioration did not occur during a period of 24 weeks. The rigidity increased to 1.6 times 6 months after implantation as compared with the initial value. This compound can be used as paste and is transformed into a rigid compound in about 4 min without noticeable elevation of the temperature. Thus, this (AW-G)-(A-P) composite can be used as a bone defect filler, and there is a possibility that it can even be used as a bone cement if higher rigidity can be attained.

L13 ANSWER 29 OF 32 MEDLINE
AN 90110261 MEDLINE
DN 90110261
TI Study of the osteoconductive properties of **bioactive glass** fibers.
AU Pazzaglia U E; Gabbi C; Locardi B; Di Nucci A; Zatti G; Cherubino P
CS Clinica Ortopedica dell'Universit`a di Pavia, Italy..
SO JOURNAL OF BIOMEDICAL MATERIALS RESEARCH, (1989 Nov) 23 (11) 1289-97.
Journal code: HJJ. ISSN: 0021-9304.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199004
AB **Bioactive glass** fibers have been prepared and implanted in cortical defect and in muscle. The fibers can act as a substrate for bone apposition, when implanted in a cortical defect, and become incorporated in the new bone matrix. The same results were obtained when fibers were implanted in a muscle pouch together with bone marrow cells. An intense inflammatory reaction was observed when **bioactive glass** fibers were implanted in muscle; the reaction was milder when fibers were implanted in bone or in muscle together with bone marrow cells. This fact supports the hypothesis that osteogenic cells adhere in an early phase to the substrate and prevent recognition of the foreign material by inflammatory cells. This appears to be a fundamental condition for direct bone matrix apposition on the surface of fibers.

L13 ANSWER 30 OF 32 CAPLUS COPYRIGHT 2001 ACS
AN 1988:411693 CAPLUS
DN 109:11693
TI Investigation of antigenicity of **bioactive glass** SE51
AU Semba, Shuichi
CS Dent. Sch., Kagoshima Univ., Japan
SO Seitai Zairyo (1988), 5(4), 181-202
CODEN: SEZAEH; ISSN: 0910-304X

DT Journal
LA Japanese
AB The antigenicity of **bioactive glass** SE51 was studied in mice sensitized with suspensions of a test material by the foot rad assay, and in rabbits sensitized with the ext. of the test material with homologous serum albumin by the Ouchterlong gel diffusion method and the **skin** test. Also the path tests were performed in humans implanted with artificial dental root coated with SE51. The **bioactive glass** itself did not show antigenicity. The ext. of SE51 did not become antigenic by reaction with protein. No allergic reactions were obsd. in any subjects who had been implanted with artificial dental root coated with SE51.

L13 ANSWER 31 OF 32 MEDLINE
AN 85079402 MEDLINE
DN 85079402
TI [Paranasal sinus reconstruction with bioactive bone cement--a 5-year animal experiment study].
Stirnhohlenrekonstruktion mit bioaktivem Knochenzement--5 Jahre tierexperimentelle Erfahrungen.
AU Reck R; Wallenfang T; Schindler E; Rudigier J
SO HNO, (1984 Oct) 32 (10) 413-6.
Journal code: G9P. ISSN: 0017-6192.
CY GERMANY, WEST: Germany, Federal Republic of
DT Journal; Article; (JOURNAL ARTICLE)
LA German
FS Priority Journals
EM 198504
AB The newly developed bioactivated bone cement Palavital is composed of polymethylmethacrylate, glass fibers and **bioactive glass** ceramic. The superficially located glass ceramic particles offer the possibility of true bonding of the bone cement to the bony implantation bed. Reconstruction of the frontal sinuses and the skull was performed on 9 dogs. The follow up was 14 days to 5 years. The implants were checked by tomography and histology. All implants were tolerated without any inflammatory reaction. The bond between bone and implant was demonstrated. Palavital seems to be an improvement on bone cement on a polymethylmethacrylate base.

L13 ANSWER 32 OF 32 MEDLINE
AN 84123353 MEDLINE
DN 84123353
TI [Mechanically processable **bioactive glass** ceramics--a new biomaterial for bone replacement. 1].
"Maschinell bearbeitbare bioaktive Glaskeramiken"--ein neues Biomaterial fur den Knochenersatz 1. Mitteilung.
AU Gummel J; Holand W; Naumann K; Vogel W
SO ZEITSCHRIFT FUR EXPERIMENTELLE CHIRURGIE, TRANSPLANTATION, UND KUNSTLICHE ORGANE, (1983) 16 (6) 338-43.
Journal code: XU2.
CY GERMANY, EAST: German Democratic Republic
DT Journal; Article; (JOURNAL ARTICLE)
LA German
FS Priority Journals
EM 198405
AB Anorganic materials as glass ceramics with their main crystal phase apatite can be used as biomaterial for the bone substitute. An interior compound between bioglass-ceramics implants and the bone was showed in animal experiments. The apatite crystals in the bioglass-ceramics produce

obviously the start point for this fusion process. The shear strength of the compound is on average the eightfold of highly compact Al2O3 ceramics. The **bioactive glass** ceramics could solve possibly the problems of implant loosening and defect bridging-over. Mechanical processable bioactive ceramics was developed and tested with regard to these employment spheres.

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